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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,187	05/04/2001	Ramesh Nagarajan	13-10	9273

46363 7590 03/09/2007

PATTERSON & SHERIDAN, LLP/
LUCENT TECHNOLOGIES, INC
595 SHREWSBURY AVENUE
SHREWSBURY, NJ 07702

EXAMINER	
WILSON, ROBERT W	
ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/849,187	NAGARAJAN ET AL.	
	Examiner	Art Unit	
	Robert W. Wilson	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/14/06*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-6,8-10,14,15 and 17-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 3-6, 8-10, 14-15, & 17-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

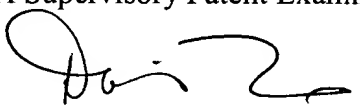
Response to Appeal

1. In view of the appeal brief filed on 12/4/06, PROSECUTION IS HEREBY REOPENED. A new ground of rejection set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below: 

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-5, 9, 15, & 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Referring to claims 1, the applicant was previously informed that "an interface" used in both line 3 and line 5 of claim is unclear whether there are two interfaces or one interface. The applicant later treats "second high capacity trunk " as having antecedent basis in line 8 to the previous reference line 5 which is inconsistent. What is meant by "an interface"?

Referring to claims 4, 9, & 17, what is meant by cable station? The applicant has admitted in the arguments dated 2/20/05 in response to claim objections that the cable shown in Figures 1-3 and cable station shown in Figures 4, 5, & 7 of the specification have different capabilities. For example the cable station in Figure 1 is merely a junction box with basic switching capability and the cable station in Figure 4 can perform protocol conversion as well as grooming or multiplexing. What is meant by "cable station"? How can one assess the metes and bound of the claim if one does not know which cable station is being referred to in claims 4, 7, & 9?

Referring to claim 15, what is meant by "signals signals" and what is meant by "the high capacity trunk"? There is no antecedent basis for "the high capacity trunk". There is antecedent basis for "first high capacity trunk" and "second high capacity trunk", Applicant needs to clarify.

Referring to claims 19, the relationship between where the another node is located compared to the type 2 node as well as how the amount of traffic relates to the portion of the low capacity signals is unclear in this claim. What is meant by "determining an amount of traffic between another type one node and said type one node determining whether said amount of traffic between said another type one node and said type one node exceeds a threshold , said threshold comprising a fraction of a capacity said first high capacity trunk and if said amount of traffic between said type one node and said another type one node does not exceed said threshold and routing said amount of traffic over said second high capacity turn to said type two node" .

Referring to claim 20, what is meant by" if said amount of traffic between said type one node and said another type one node exceed provisioning a threshold provision at least one additional trunk between said another type one node and said type one node" ? Adding another trunk is unclear because it totally unclear how the first trunk relates to the amount of traffic and the portion of low capacity signals.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 19 & 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not

described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 19 & 20 were added as amendments to the claims as of 6/33/05. No where in the specification can the examiner find the relationship between a type one node, another type one node, type 2 node, amount of traffic, portion of low capacity client signals and amount of traffic. Figures 4, 5, & 7 show the relationship between two central offices (type one nodes) and two cable stations (type 2 nodes). Each of these figures show different combinations of connections of these nodes but no where is the relationship which claim 19 defines taught. No where in the specification does if define the relationship between the "amount of traffic" and "low capacity client signals" either. Because the examiner cannot find the above relationship the examiner cannot also find the relationship associated with threshold and adding an additional trunk? The examiner suggests that applicant amend the claim to reflect the configuration of nodes shown in Figures 4, 5, or 7 and to reflect the threshold processing defined in Figure 6.

Referring to claim 19, where in the specification is "wherein the grooming of the portion of those low capacity signals destined for said type one node into the high capacity trunk to said type two node further comprises: determining whether said amount of traffic between said another type one node and said type one node exceeds a threshold , said threshold comprising a fraction of said capacity of said high capacity trunk, and if said amount of traffic between said type one node and said another type one node does exceed said threshold routing said amount of traffic over said high capacity trunk to said type two node" is this taught? The specification teaches checking to see if the traffic reaches a certain amount and if so adding an additional trunk per description associated with Figure 6.

Referring to claim 20, No where in the specification can the examiner find the limitation of "if said amount of traffic between said type one node and said another type of one nodes does not exceed said threshold, routing said amount of traffic over said second high capacity trunk to said type two node". Where in the specification is "if said amount of traffic between said type one node and said another type of one nodes does not exceed said threshold, routing said amount of traffic over said second high capacity trunk to said type two node" taught?
Where in the specification is "further comprising: if said amount of traffic between said type one node and said another type one node exceed said threshold provision at least one additional trunk between aid another type one node and said type one node" is taught?

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 3, 6, 8, 14, & 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Remein (U.S. Patent No.: 6,477,142).

Referring to claim 1, Remein teaches: a node (38 per Fig 3) for grooming low capacity client signal into a high capacity signal (38 per Fig 3grooms 36a & 36b per Fig 3 (low capacity client signal) into SONET high capacity signal) comprising:

An interface (38a per Fig 3) to a first high capacity trunk (35b per Fig 3 is SONET (first high capacity trunk)) for directly coupling to a type 1 node (Directly coupled is not defined in applicant's specification as directly connected; therefore, directly coupled has a broad meaning. The examiner has interpreted that directly coupled as 35B directly couples to 39 per Fig 3 (type 1 node))
An interface (38a per Fig 3) to a second high capacity trunk (35a which is a SONET Trunk per Fig 3 (2nd high capacity trunk) coupled to a type two node (35a directly coupled to 32 which can be a line terminating equipment or (type 2 node))

Wherein only a portion of those low capacity client signals destined for the type one node are groomed into the second high capacity trunk to the type two node (36a per Fig 3 is the portion of the low capacity client signals which are destined for 39 per Fig 3 (type 1 node) which are groomed into the second high capacity trunk (35A per Fig 3 is a SONET trunk (2nd high capacity trunk))
In addition Remein teaches:
Regarding claim 3, wherein the type two node is a high traffic node (32 per Fig 3 (type 2 node) is a high traffic node because it carries SONET traffic)

Referring to claim 6, Remein teaches: an apparatus (38 per Fig 3) for performing selective grooming on client signals (36a & 36b per Fig 3), the apparatus comprising:
A node coupled (a) directly to a first node via a first high capacity trunk (Directly coupled is not defined in applicant's specification as directly connected; therefore, directly coupled has a broad meaning. 38 per Fig 3 (node) is directly coupled via 35a per Fig 3 (SONET high capacity trunk) to 39 per Fig 3 (first node))

And (b) directly to a second node via a second high capacity trunk such that only a portion of the client signals destined for the first node are groomed into the high second capacity trunk to the second node (Directly coupled is not defined in applicant's specification as directly connected; therefore, directly coupled has a broad meaning. 38 per Fig 3 (node) is coupled via 35B per Fig

3 (2nd SONET high capacity trunk) to 34 per Fig 3 (2nd node)) such that only a portion of the client signals destined to the first node are groomed into the high second capacity trunk of the second node (36a per Fig 3 (portion of client signal) which is destined for 39 per Fig 3 (first node) is groomed into 35b per Fig 3 (2nd high capacity trunk) of 34 per Fig 3 (2nd node))

In addition Remein teaches:
Regarding claim 8, wherein the first node is a low traffic node and the second node is a high traffic node (The applicant broadly claims high traffic and low traffic nodes in the claim. The examiner has interpreted 34 per Fig 3 (2nd node) as a high traffic node and 39 per Fig3 (First node) as a low traffic node))

Referring to claim 14, Remein teaches: a method for use in a node (38 per Fig 3), the method comprising the steps of :

Receiving low capacity client signals (The applicant has broadly claimed low capacity client signals. 38 per Fig 3 receives 36a and 36b per Fig 3 which the examiner has interpreted as low capacity client signals)

Selectively grooming a portion of the received low capacity client signals into a first high capacity trunk directly coupled to a first type node for transmission to the first type of node (Directly coupled is not defined in applicant's specification as directly connected; therefore, directly coupled has a broad meaning. 38 per Fig 3 selectively grooms 36a per Fig 3 which is a portion of 36a and 36b per Fig 3 which is a low capacity client signal into 35a per Fig 3 (first high capacity trunk) which is directly coupled to 39 per Fig 3 (first type of node) for transmission of 36a per Fig 3 to 39 per Fig 3 (first type of node))

Transmitting other of the low capacity client singles over a second high capacity trunk directly coupled to a second type of node (38 per Fig 3 transmits 35b per Fig 3 (other portion of low capacity client signal) over 35b per Fig 3 (2nd high capacity trunk) directly coupled to 34 per Fig 3 (second type of node))

Wherein said other of the low capacity signals transmitted over the second high capacity trunk comprise low capacity client signals destined for the first type of node (35b per Fig 3 (other of the low capacity signals) transmitted over 35b per Fig 3 (2nd high capacity trunk) comprises low capacity signals destined for the first type of node (39 per Fig 3))

In addition Remein teaches:
Regarding claim 18, wherein the second type of node is a low traffic node and the first type of node is a high traffic node (The applicant broadly claims high traffic node and low traffic node 34 per Fig 3 (type 2 node) is a low traffic node because no traffic is broken out and 39 per Fig 3 (first type of node) is high traffic because traffic is broken out)

8. Claims 4, 9, & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Remein (U.S. Patent No.: 6,477,142) in view of the applicant's specification admitted prior art.

Referring to claim 4, Remein teaches the apparatus of claim 1.

Remein does not expressly call for: wherein the type one node is a cable station and the type two node is a central office.

The applicant's admitted prior art associated with Figure 1 teaches: cable station is one type of node which is used to splice a path and central office is another type of node which is used to switch traffic.

It would have been obvious to one of ordinary skill in the art at the time to add the name cable station and central office of applicant admitted prior art the node 39 per Fig 3 or type 1 node and node 32 per Fig 3 or type 2 node of Remein because node 39 per Fig 3 or type 1 node drops and adds and 32 per Fig 3 or type 2 node splices lines.

Referring to claim 9, Remein teaches the apparatus of claim 6.

Remein does not expressly call for: wherein the first node is a cable station and the second node is a central office

The applicant's admitted prior art associated with Figure 1 teaches: cable station is one type of node which is used to splice a path and central office is another type of node which is used to switch traffic.

It would have been obvious to one of ordinary skill in the art at the time to add the name cable station and central office of applicant admitted prior art the node 39 per Fig 3 or first node and node 34 per Fig 3 or second node of Remein wherein the node 34 per Fig 3 is a Central Office because node 34 per Fig 3 is capable of switching traffic and wherein node 39 per Fig 3 or first node is a cable station because 39 per Fig 3 splices a path .

Referring to claim 17, Remein teaches the apparatus of claim 14.

Remein does not expressly call for: wherein the second type of node is a cable station and the first type of node is a central office.

The applicant's admitted prior art associated with Figure 1 teaches: cable station is one type of node which is used to splice a path and central office is another type of node which is used to switch traffic.

It would have been obvious to one of ordinary skill in the art at the time to add the name cable station and central office of applicant admitted prior art to the node 39 per Fig 3 or first type of

node and node 32 per Fig 3 or second type of node of Remein because node 39 per Fig 3 or type 1 node drops and adds and 32 per Fig 3 or type 2 node terminates lines.

8. Claims 5, 10, & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Remein (U.S. Patent No.: 6,477,142) in view of the Tyrrell (U.S. Patent No.: 5,185,736)

Referring to claim 5, Remein teaches: the apparatus of claim 1 and conversion of the low capacity client signals to the high capacity synchronous transport mode signal as synchronous transport mode signals

Remein does not expressly call for: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal

Tyrrell teaches: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal per Fig 7.

It would have been obvious to add the conversion pleischronous digital hierarchy signal to synchronous transport mode signal of Tyrrell to be performed on the low capacity client signals Remein in order to convert from one plesiochronous digital hierarchy which is one form of SONET to another synchronous transport module which is another form of SONET

Referring to claim 10, Remein teaches the apparatus of claim 6 and conversion of the low capacity client signals which are synchronous transport mode signals to the high capacity trunk synchronous transport mode signal as synchronous transport mode signals

Remein does not expressly call for: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal

Tyrrell teaches: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal per Fig 7.

It would have been obvious to add the conversion pleischronous digital hierarchy signal to synchronous transport mode signal of Tyrrell to be performed on the low capacity client signals Remein in order to convert from one plesiochronous digital hierarchy which is one form of SONET to another synchronous transport module which is another form of SONET

Referring to claim 15, Remein teaches the method of claim 14,

Remein does not expressly call for: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal

Tyrrell teaches: conversion of pleischronous digital hierarchy signal to synchronous transport mode signal per Fig 7.

It would have been obvious to add the conversion pleischronous digital hierarchy signal to synchronous transport mode signal of Tyrrell to be performed on the low capacity client signals Remein in order to convert from one plesiochronous digital hierarchy which is one form of SONET to another synchronous transport module which is another form of SONET

9. Claims 19 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Remein

(U.S. Patent No.: 6,477,142) in view of Dravida (U.S. Patent No.: 5,253,248)

Referring to claim 19, Remein teaches the apparatus of claim 1 wherein grooming of the portion of those low capacity client signals destined for said type one node into the second high capacity trunk to said type two node and adding an another type one node (Path terminating per Fig 1)

Remein does note expressly call for: determining an amount of traffic between another type one node and said type one node and determining whether said amount of traffic between said another type one node and type one node exceed a threshold said threshold comprising a fraction of capacity of said first high capacity trunk and if said amount of traffic between said type one node and said another type one nodes does not exceed said threshold, routing said amount of traffic over said second high capacity trunk to said type two node.

Dravida teaches: determining an amount of traffic between another type one node and said type one node and determining whether said amount of traffic between said another type one node and type one node exceed a threshold said threshold comprising a fraction of capacity of said first high capacity trunk and if said amount of traffic between said type one node and said another type one nodes does not exceed said threshold, routing said amount of traffic over said second high capacity trunk to said type two node per col. 3 lines 10-45.

It would have been obvious to add the thresholding of traffic of Dravida to the apparatus of Remein in order to balance the traffic load between nodes thus improving the performance.

Referring to claim 20, the combination of Remein and Dravida teaches: the apparatus of claim 1and the type one nodes.

The Remein not expressly call for: if said amount of traffic between said type one node and said another type one node exceeds said threshold provisioning at least one additional trunk between said another type one node and said type one node.

Dravida teaches: adding an additional route when the congestion exceeds a threshold which the examiner interprets provisioning at least one additional trunk between said another type one node and said type one node per col. 3 lines 10-45.

It would have been obvious to add thresholding and provisioning of additional trunk of Dravida to the apparatus of the combination of Remein and Dravida in order to balance the traffic between the two nodes thus improving the performance.

Response to Amendment

10. Applicant's arguments with respect to claim1, 3-6, 8-10, 14-17, & 17-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571/272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Robert W. Wilson

Robert W Wilson
Examiner
Art Unit 2616

RWW
2/28/07

DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600